

Claims

1. Inkjet printing device for inks containing a high loading of pigment, comprising an inkjet printhead (15) for continuous printing, an ink reservoir (1), and a feeding circuit (2, 10) for feeding said printhead with ink from the reservoir and returning gutter ink from the printhead to the reservoir, characterized in that the device further comprises on the one hand a two stages mixing arrangement comprising a recirculation loop (5, 6, 7) with mixing means (4, 8), taking ink from the reservoir and returning it to the reservoir, and a stirring system (11, 18) for ink contained in the reservoir, and, additionally, a means of heating the ink and ensuring the temperature of the ink is maintained at a predetermined temperature, above the ambient level.

2. Device according to claim 1, characterized in that at least five static mixers (3, 4, 8, 13, 14) are incorporated at strategic points within the system.

3. Device according to claim 2, characterized in that the printhead feeding circuit comprises a filter (12) placed between two static mixers (13, 14), upstream of the printhead, and filter heating means arranged in such a manner that the ink temperature in the filter is higher than elsewhere in the printhead supply line.

4. Device according to claim 2, characterized in that the recirculation loop comprises a recirculation pump (7) located between two static mixers (4, 8).

5. Device according to claim 4, characterized in that the recirculation pump is a peristaltic pump.

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6. Device according to claim 4, characterized in that the recirculation pump is associated with inlet and outlet tube segments (6) sunk in a heated block for maintaining the said main ink temperature level of the device

7. Device according to claim 2, characterized in that the said stirring means for ink in the reservoir consist of a magnetic stirring arrangement or of a mechanical rotating stirrer.

8. Inkjet printing process for inks having a high content in high density pigment, characterized in that an ink which exhibits the phenomenon of "soft settling" is prepared, and this ink is used for filling the ink reservoir of a printing device according to any one of the claims 1 to 7.

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